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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
DICKERSON, CHAD S	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No.	Applicant(s)	
	10/632,957	NAMIZUKA, YOSHIYUKI	
	Examiner	Art Unit	
	Chad Dickerson	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *8/4/2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 17, filed 12/21/2007, with respect to the specification objections have been fully considered and are persuasive. The objections of the specification have been withdrawn.

2. Applicant's arguments, see page 17, filed 12/21/2007, with respect to the claim objections have been fully considered and are persuasive. The objections of the claims have been withdrawn.

3. Applicant's arguments, see page 17, filed 12/21/2007, with respect to 101 rejections have been fully considered and are persuasive. The 101 rejections of the claims have been withdrawn.

4. Applicant's arguments, see page 16, filed 12/21/2007, with respect to the 112 2nd paragraph rejections have been fully considered and are persuasive. The 112 2nd paragraph rejections of the claims have been withdrawn.

5. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection. The amendment to the claims necessitated the new grounds of rejection. However, the same references are being used with a clearer translation of the foreign documents. Some of the amended claims are also rejected by additional references listed in the rejection below.

Also, the Applicant presented the argument that "*the expansion control device is configured to allocate resources of the image forming apparatus*" is not taught by the reference of Kobayashi. The Examiner respectfully disagrees with this assertion.

With the External device in Kobayashi considered as the expansion control device and this device is used to control the functions of the copier using the control data within the external device, the above feature is performed. Described in paragraphs [0017]-[0024] is information related to when the external device is connected to the copier device, the control of the overall copier can be from the connected external device. With the use of the functions of the copier from the external connected device, the feature of allocating the resources of the image forming apparatus is performed.

Therefore, in light of the above arguments, the rejection below is maintained.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 4, 6, 11, 12, 14, 17, 19, 20, 24, 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi '194 (JP Pub No 2001270194).

Re claim 1: Kobayashi '194 discloses an image forming apparatus, comprising:

an image reading device configured to read an image of an original document **(i.e. Kobayashi '194 discloses an image forming device that serves as a copier that is able to copy documents that are read by the system's scanner. In the description of the prior art, a copier is mentioned to perform the feature of**

reading, or scanning, an image of a document; see fig. 4; paragraphs [0002]-[0008]);

an image forming device configured to form an image on a sheet in accordance with image data read by the image reading device **(i.e. in an image forming device, it is conventional to have this type of device to from an image on a sheet in accordance to an image scanned in the forming device. Since the prior art is able to expand the functionality of the device by adding a printer, the function of printing a document that has been scanned into the system by the scanner it performed; see fig. 4; paragraphs [0002]-[0008])**;

an operation unit connecting device configured to detachably connect an operation unit, said operation unit being configured to accept inputting of operational instructions operating the image forming apparatus **(i.e. it is conventional to have a operation unit, that is able to have instructions entered on the operation unit, have a connecting device that connects the operation unit to the system the entered instructions are used to control. Like mentioned in applicant's specification regarding the background of the invention, a connection to a bus (whether serial or parallel) within a system involves some type of connection to communicate with a system's main CPU. This connection can be comprised of a USB or an SCSI connection device; see figs. 2 and 4; paragraphs [0002]-[0008], [0011] and [0020]-[0022])**;

a process controller configured to control an operation of the image forming apparatus **(i.e. when viewing drawing 4, the CPU (102) contained in the main**

control device (101) is considered as the process controller since it is configured to control the operation of the image forming apparatus by the commands stored in the ROM (103); see figs. 1 and 4; paragraphs [0002]-[0008]); and

an expansion unit connecting device configured to connect an additionally attachable expansion unit **(i.e. in the conventional system described in Kobayashi '194, a connecting means is used to connect the external device, which is considered as the expansion device, to the image forming apparatus. The connecting means is used to connect additionally attachable external devices, such as a fax, scanner or printer, to the image forming device; see figs. 1 and 4; paragraphs [0002]-[0008] and [0013]-[0020])**, said additionally attachable expansion unit including an expansion control device configured to allocate the image reading device or the image forming device to a job **(i.e. when the external device used to expand the image forming device is detected to be connected, the system gives the external device connected control over the CPU in the main in the image forming device. When the external devices are detected to be connected, the external devices are passed the control of the image forming apparatus by the control pass change section. The external apparatus, which is considered as the expansion unit, is connected to the copier, which contains operation control data that is used to control the basic copier functions of the copier used in the system; see fig. 4; paragraphs [0017]-[0024])**,

wherein the expansion control device is configured to allocate resources of the image forming apparatus **(i.e. with the expansion control device given operation**

control data for both the external apparatus and the basic functions of the image forming apparatus, the feature of allocating the resources of the copier to execute some function is performed; see paragraphs [0017]-[0024]), and

said process controller controls the operation unit to operate **(i.e. in the system of Kobayashi '194, both the CPU (702) of the image forming device and the Fax unit (713) are able to control the LCD and an extension change key on the LCD. The CPU in the copier or image forming apparatus is provided with the operating part control data that is used to control the functions of the copier. The CPU in the main body is considered as the process controller; see figs. 2-3; paragraphs [0002]-[0008], [0011] and [0017]-[0024])** and receives a control command from the expansion control device to perform image formation **(i.e. in the system of Kobayashi '194, operating control data is sent from the external apparatus connected to the copier and the both operations of the external apparatus and the copier's basic functions can be carried out using the operation part control data from the external apparatuses; see figs. 1, 3 and 4; paragraphs [0017]-[0024])**.

Re claim 2: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the image forming apparatus according to claim 1, wherein said process controller includes, a memory configured to store at least two control programs for controlling the image forming apparatus **(i.e. in the conventional embodiment of the invention, the conventional apparatus of the copier stores programs involving control of the main body of the copier and the control of the**

external apparatus connected to the main body. In this case, the ROM has to stored programs enabling the copier to perform both features in the conventional system; see figs. 1 and 4; paragraphs [0008] and [0017]-[0024]),

an extension unit detecting device configured to detect a presence of connection of the additionally attached expansion unit **(i.e. a connection detecting means is used to detect whether the copy machine is connected to an external device. This performs the feature of detecting the presence of the external device additionally attached to the copier; see figs. 1 and 4; paragraphs [0017]-[0024])**, and

a control program selecting device configured to select an applicable control program to be used by the process controller in accordance with the detection result of the extension unit detecting device **(i.e. the control pass change section of the invention performs the feature of passing control to the CPU of the copy machine or the external device connected to the copy machine. This performs the feature of choosing the control program to use in controlling the system of the copy machine and other external devices connected; see paragraphs [0008]-[0013])**.

Re claim 4: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the image forming apparatus according to claim 2, wherein said extension unit detecting device detects the presence of connection of the additionally attached expansion unit by determining if any unit is connected to the expansion unit connecting device **(i.e. a connection detecting means is used to detect whether the copy machine is connected to an external device.**

Determining if an external device is connected to a connecting means performs the detection of the presence of the connection to the copier; see figs. 1 and 4; paragraphs [0017]-[0024]).

Re claim 6: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the image forming apparatus according to claim 2, wherein said extension unit detecting device detects the presence of the connection of the additionally attached expansion unit by determining that the additionally attached expansion unit is connected when the operation unit is not connected to the operation unit connecting device **(i.e. in one of the problems to be solved, in order to raise the basic functionality of the copy machine, the copy machine either has an LCD connected to the machine itself, or the expansion device control over the operation unit that can control the copy machine. The copy machine can have an external device connected and can recognize this connection through the connection means when the operating unit is not detected to be connected to control the CPU in the main body since the operating part control path switching part does not function in the scenario involving the external apparatus. With the master operating part control IC operating as an operation unit and the operating part not being connected to the CPU of the main body because of the operating part control path switching part not functioning to have the master operating part control the copier, the feature of the operating unit not connected to the operation unit connecting device is performed. This performs the feature of**

having an external device connected with an operation unit itself and a regular operation unit alone not being connected to the CPU of the copier to control the device; see paragraphs [0013]-[0024]), and by determining that the additionally attached expansion unit is not connected when the operation unit is connected to the operation unit connecting device **(i.e. in the system, when the external device is not connected to the main body of the machine through UARTs, the operation part control path switching part is functioning and detects the master side operating part control IC (105) connected to the CPU of the main body through the switching part. With this connection, the external device is not connected since the master side operating part control IC is not connected at the same time to the CPU of the main body as the external device because conflicts in the software may occur, which is the reason for the improvement over the conventional system; see paragraphs [0013]-[0022])**.

Re claim 11: Kobayashi '194 discloses an image forming apparatus, comprising:

an image forming apparatus including an image reading device configured to read an image of an original document **(i.e. Kobayashi '194 discloses an image forming device that serves as a copier that is able to copy documents that are read by the system's scanner. In the description of the prior art, a copier is mentioned to perform the feature of reading, or scanning, an image of a document; see fig. 4; paragraphs [0002]-[0008])**,

an image forming device configured to form an image on a sheet in accordance

with image data read by the image reading device **(i.e. in an image forming device, it is conventional to have this type of device to from an image on a sheet in accordance to an image scanned in the forming device. Since the prior art is able to expand the functionality of the device by adding a printer, the function of printing a document that has been scanned into the system by the scanner it performed; see fig. 4; paragraphs [0002]-[0008])**,

an operation unit connecting device configured to detachably connect an operation unit, said operation unit being configured to accept inputting of operational instructions operating the image forming apparatus **(i.e. it is conventional to have a operation unit, that is able to have instructions entered on the operation unit, have a connecting device that connects the operation unit to the system the entered instructions are used to control. Like mentioned in applicant's specification regarding the background of the invention, a connection to a bus (whether serial or parallel) within a system involves some type of connection to communicate with a system's main CPU. This connection can be comprised of a USB or an SCSI connection device; see figs. 2 and 4; paragraphs [0002]-[0008] and [0020]-[0022])**,

a process controller configured to control an operation of the image forming apparatus **(i.e. when viewing drawing 4, the CPU (102) contained in the main control device (101) is considered as the process controller since it is configured to control the operation of the image forming apparatus by the commands stored in the ROM (103); see figs. 1 and 4; paragraphs [0002]-[0008])**; and

an expansion unit connecting device configured to connect an additionally attachable expansion unit **(i.e. in the conventional described in Kobayashi '194, a connecting means is used to connect the external device, which is considered as the expansion device, to the image forming apparatus. The connecting means is used to connect additionally attachable external devices, such as a fax, scanner or printer, to the image forming device; see figs. 1 and 4; paragraphs [0002]-[0008] and [0013]-[0020])**, said additionally attachable expansion unit connecting device including an expansion control device configured to allocate the image reading device or the image forming device to a job **(i.e. when the external device used to expand the image forming device is detected to be connected, the system gives the external device connected control over the CPU in the main in the image forming device. When the external devices are detected to be connected, the external devices are passed the control of the image forming apparatus by the control pass change section. The external apparatus, which is considered as the expansion unit, is connected to the copier, which contains operation control data that is used to control the basic copier functions of the copier used in the system; see fig. 4; paragraphs [0017]-[0024])**,

wherein the expansion control device is configured to allocate resources of the image forming apparatus **(i.e. with the expansion control device given operation control data for both the external apparatus and the basic functions of the image forming apparatus, the feature of allocating the resources of the copier to execute some function is performed; see paragraphs [0017]-[0024])**, and

said process controller is configured to control the operation unit to operate **(i.e. in the system of Kobayashi '194, both the CPU (702) of the image forming device and the Fax unit (713) are able to control the LCD and an extension change key on the LCD. The CPU in the copier or image forming apparatus is provided with the operating part control data that is used to control the functions of the copier. The CPU in the main body is considered as the process controller; see figs. 2-3; paragraphs [0002]-[0008], [0011] and [0017]-[0024])**,

and receives a control command from the expansion control device to perform image formation **(i.e. in the system of Kobayashi '194, operating control data is sent from the external apparatus connected to the copier and the both operations of the external apparatus and the copier's basic functions can be carried out using the operation part control data from the external apparatuses; see figs. 1, 3 and 4; paragraphs [0017]-[0024])**.

Re claim 12: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the image forming system according to claim 11, wherein

said operation unit is connected to the expansion unit connecting device **(i.e. in the system, the operation unit is used to communicate with the main board housing the CPU using synchronous serial communications. With serial communications using an interface, such as a USB or an SCSI device, the function of the operation unit connected to a expansion unit connecting device is performed; see paragraph [0003])**,

said expansion control device of the expansion unit connecting device includes a first control device configured to control an operation of the operation unit **(i.e. in Kobayashi '194, the operation unit is used in conjunction with the operation control path switching part that is used to perform the path of control from the master operating part control IC to the CPU. With the use of inputting instructions from the master operating part control IC to the CPU, this control device is used to control the CPU of the main board, which controls the overall copier in the system; see paragraph [0013] and [0017]-[0024])**,

said process controller of the image forming apparatus includes a second control device configured to control an operation of the operation unit **(i.e. with the connection of the expansion device, the CPU of the overall image data changes the operation panel, which is considered as an operation unit, to reflect the connection of the external devices to the copier. This can be seen in figure 2. The CPU is used to then work with the external device connected and the extension device connected can perform operating part control; see figs. 2 and 3; paragraphs [0017]-[024])**, and

said image forming system further includes an operation selecting device configured to select one of the first and second control devices **(i.e. the control pass change section is able to change the control of the image forming apparatus from either the expansion device or the image forming device with an installed operation unit. With this changing the control of the copier, this performs the feature of selecting control between the two control devices; see paragraphs**

[0009]-[0024]).

Re claim 14: The teachings of Kobayashi '194 are disclosed above. Kobayashi '194 discloses the image forming system according to claim 12, wherein said additionally attached expansion unit is configured to engage with at least one function adding unit, said at least one function adding unit adding at least one function to the image forming system under control of the expansion control device **(i.e. the external devices added to the system are considered as expansion devices that add a function to the image forming apparatus. The external device not only adds a function to the image forming apparatus when added to the machine, but it also has a control unit, considered as an operation unit, that allows for the control of the image forming apparatus by the external device; see paragraphs [0009]-[0024])**, and said operation selecting device selects one of the first and second devices in accordance with a number of function adding units connected to the additionally attached expansion unit **(i.e. when viewing figure 2, when an external device is connected to add a functionality, the option of choosing that function to be performed is offered on the LCD. This allows a user to select one of the many devices connected to add other functions to the image forming apparatus; see paragraphs [0009]-[0017])**.

Re claim 17: Kobayashi '194 discloses a method for controlling an image forming apparatus including an image reading device configured to read an image of an original

document **(i.e. Kobayashi '194 discloses an image forming device that serves as a copier that is able to copy documents that are read by the system's scanner. In the description of the prior art, a copier is mentioned to perform the feature of reading, or scanning, an image of a document; see fig. 4; paragraphs [0002]-[0008])**;

an image forming device configured to form an image on a sheet in accordance with image data read by the image reading device **(i.e. in an image forming device, it is conventional to have this type of device to from an image on a sheet in accordance to an image scanned in the forming device. Since the prior art is able to expand the functionality of the device by adding a printer, the function of printing a document that has been scanned into the system by the scanner it performed; see fig. 4; paragraphs [0002]-[0008])**;

an operation unit connecting device configured to detachably connect an operation unit, said operation unit being configured to accept inputting of operational instructions operating the image forming apparatus **(i.e. it is conventional to have a operation unit, that is able to have instructions entered on the operation unit, have a connecting device that connects the operation unit to the system the entered instructions are used to control. Like mentioned in applicant's specification regarding the background of the invention, a connection to a bus (whether serial or parallel) within a system involves some type of connection to communicate with a system's main CPU. This connection can be comprised of a USB or an SCSI connection device; see figs. 2 and 4; paragraphs [0002]-[0008],**

[0011] and [0020]-[0022]);

a process controller configured to control an operation of the image forming apparatus **(i.e. when viewing drawing 4, the CPU (102) contained in the main control device (101) is considered as the process controller since it is configured to control the operation of the image forming apparatus by the commands stored in the ROM (103); see figs. 1 and 4; paragraphs [0002]-[0008])**; and

an expansion unit connecting device configured to connect an additionally attachable expansion unit **(i.e. in the conventional system described in Kobayashi '194, a connecting means is used to connect the external device, which is considered as the expansion device, to the image forming apparatus. The connecting means is used to connect additionally attachable external devices, such as a fax, scanner or printer, to the image forming device; see figs. 1 and 4; paragraphs [0002]-[0008] and [0013]-[0020])**, said additionally attachable expansion unit including an expansion control device configured to allocate the image reading device or the image forming device to a job **(i.e. when the external device used to expand the image forming device is detected to be connected, the system gives the external device connected control over the CPU in the main in the image forming device. When the external devices are detected to be connected, the external devices are passed the control of the image forming apparatus by the control pass change section. The external apparatus, which is considered as the expansion unit, is connected to the copier, which contains operation control data that is used to control the basic copier functions of the copier used in the**

system; see fig. 4; paragraphs [0017]-[0024]), and said method comprising:

storing at least one control program in a memory, said at least one control program being used by the process controller to control an operation of the image forming apparatus **(i.e. the ROM (103) in the conventional stores control information pertaining to the CPU (102) and the main control strip (101) that controls the whole of the image forming apparatus. The program stored on the ROM is used to control the image forming apparatus by using the CPU (102), considered analogous to the process controller; see fig. 4; paragraphs [0001]-[0011])**;

detecting a presence of connection of the additionally attachable expansion unit **(i.e. a connection detecting means is used to detect whether the copy machine is connected to an external device. Determining if an external device is connected to a connecting means performs the detection of the presence of the connection. This performs the feature of detecting the presence of the external device additionally attached to the copier; see figs. 1 and 4; paragraphs [0017]-[0024])**;

selecting a control program used by the process controller in accordance with a detection result **(i.e. the control pass change section, or the operating part control switching means, of the invention performs the feature of passing control to the CPU of the copy machine or the external device connected to the copy machine. This performs the feature of choosing the control program to use in controlling the system of the copy machine and other external devices connected; see paragraphs [0008]-[0013])**; and

controlling the image forming apparatus using the selected control program **(i.e. once the control change pass section changes control within the system, the image forming apparatus is controlled by an operation unit or an external device with an operation unit. The control change pass section selects a manner of control of the apparatus through the programs stored on the apparatus's ROM and the detection result; see paragraphs [0008]-[0013])**; and

allocating, by the expansion control device, resources of the image forming apparatus when the presence of the connection of the additionally attachable expansion is detected **(i.e. with the expansion control device, or external apparatus, given operation control data over the operating part for both the external apparatus and the basic functions of the image forming apparatus, the feature of allocating the resources of the copier to execute some function is performed; see paragraphs [0017]-[0024]).**

Re claim 19: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the method according to claim 17, wherein said detection step includes detecting the presence of connection of the additionally attached expansion unit by determining if any unit is connected to the expansion unit connecting device **(i.e. a connection detecting means is used to detect whether the copy machine is connected to an external device. Determining if an external device is connected to a connecting means performs the detection of the presence of the connection. This performs the feature of detecting the presence of the external device**

additionally attached to the copier; see figs. 1 and 4; paragraphs [0017]-[0024]).

Re claim 20: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the method according to claim 17, wherein said detection step include detecting the presence of the connection of the additionally attachable expansion unit by determining that the additionally attachable expansion unit is connected when the operation unit is not connected to the operation unit connecting device **(i.e. in one of the problems to be solved, in order to raise the basic functionality of the copy machine, the copy machine either has an LCD connected to the machine itself, or the expansion device control over the operation unit that can control the copy machine. The copy machine can have an external device connected and can recognize this connection through the connection means when the operating unit is not detected to be connected to control the CPU in the main body since the operating part control path switching part does not function in the scenario involving the external apparatus. With the master operating part control IC operating as an operation unit and the operating part not being connected to the CPU of the main body because of the operating part control path switching part not functioning to have the master operating part control the copier, the feature of the operating unit not connected to the operation unit connecting device is performed. This performs the feature of having an external device connected with an operation unit itself and a regular operation unit alone not being connected to the CPU of the copier to control the device; see**

paragraphs [0013]-[0024]), and by determining that the additionally attachable expansion unit is not connected when the operation unit is connected to the operation unit connecting device **(i.e. in the system, when the external device is not connected to the main body of the machine through UARTs, the operation part control path switching part is functioning and detects the master side operating part control IC (105) connected to the CPU of the main body through the switching part. With this connection, the external device is not connected since the master side operating part control IC is not connected at the same time to the CPU of the main body as the external device because conflicts in the software may occur, which is the reason for the improvement over the conventional system; see paragraphs [0013]-[0022])**.

Re claim 24: Kobayashi '194 discloses a computer-readable storage medium, including computer executable instructions, when executed by a processor, cause the processor to perform a method for controlling an image forming apparatus including an image reading device configured to read an image of an original document **(i.e. Kobayashi '194 discloses an image forming device that serves as a copier that is able to copy documents that are read by the system's scanner. In the description of the prior art, a copier is mentioned to perform the feature of reading, or scanning, an image of a document; see fig. 4; paragraphs [0002]-[0008])**;

an image forming device configured to form an image on a sheet in accordance with image data read by the image reading device **(i.e. in an image forming device, it**

is conventional to have this type of device to from an image on a sheet in accordance to an image scanned in the forming device. Since the prior art is able to expand the functionality of the device by adding a printer, the function of printing a document that has been scanned into the system by the scanner it performed; see fig. 4; paragraphs [0002]-[0008]);

an operation unit connecting device configured to detachably connect an operation unit, said operation unit being configured to accept inputting of operational instructions for operating the image forming apparatus **(i.e. it is conventional to have a operation unit, that is able to have instructions entered on the operation unit, have a connecting device that connects the operation unit to the system the entered instructions are used to control. Like mentioned in applicant's specification regarding the background of the invention, a connection to a bus (whether serial or parallel) within a system involves some type of connection to communicate with a system's main CPU. This connection can be comprised of a USB or an SCSI connection device; see figs. 2 and 4; paragraphs [0002]-[0008], [0011] and [0020]-[0022])**;

a process controller configured to control an operation of the image forming apparatus **(i.e. when viewing drawing 4, the CPU (102) contained in the main control device (101) is considered as the process controller since it is configured to control the operation of the image forming apparatus by the commands stored in the ROM (103); see figs. 1 and 4; paragraphs [0002]-[0008])**; and

an expansion unit connecting device configured to connect an additionally

attachable expansion unit **(i.e. in the conventional system described in Kobayashi '194, a connecting means is used to connect the external device, which is considered as the expansion device, to the image forming apparatus. The connecting means is used to connect additionally attachable external devices, such as a fax, scanner or printer, to the image forming device; see figs. 1 and 4; paragraphs [0002]-[0008] and [0013]-[0020])**, said additionally attachable expansion unit including an expansion control device configured to allocate the image reading device or the image forming device to a job **(i.e. when the external device used to expand the image forming device is detected to be connected, the system gives the external device connected control over the CPU in the main in the image forming device. When the external devices are detected to be connected, the external devices are passed the control of the image forming apparatus by the control pass change section. The external apparatus, which is considered as the expansion unit, is connected to the copier, which contains operation control data that is used to control the basic copier functions of the copier used in the system; see fig. 4; paragraphs [0017]-[0024])**, and said computer program product comprising:

storing at least one control program in a memory, said at least one control program being used by the process controller to control an operation of the image forming apparatus **(i.e. the ROM (103) in the conventional stores control information pertaining to the CPU (102) and the main control strip (101) that controls the whole of the image forming apparatus. The program stored on the**

ROM is used to control the image forming apparatus by using the CPU (102), considered analogous to the process controller; see fig. 4; paragraphs [0001]-[0011]);

detecting a presence of connection of the additionally attachable expansion unit **(i.e. a connection detecting means is used to detect whether the copy machine is connected to an external device. Determining if an external device is connected to a connecting means performs the detection of the presence of the connection. This performs the feature of detecting the presence of the external device additionally attached to the copier; see figs. 1 and 4; paragraphs [0017]-[0024])**;

selecting a control program used by the process controller in accordance with a detection result **(i.e. the control pass change section of the invention performs the feature of passing control to the CPU of the copy machine or the external device connected to the copy machine. This performs the feature of choosing the control program to use in controlling the system of the copy machine and other external devices connected; see paragraphs [0008]-[0013])**; and

controlling the image forming apparatus using the selected control program **(i.e. once the control change pass section changes control within the system, the image forming apparatus is controlled by an operation unit or an external device with an operation unit. The control change pass section selects a manner of control of the apparatus through the programs stored on the apparatus's ROM and the detection result; see paragraphs [0008]-[0013])**; and

allocating, by the expansion control device, resources of the image forming

apparatus when the presence of the connection of the additionally attachable expansion is detected **(i.e. with the expansion control device, or external apparatus, given operation control data over the operating part for both the external apparatus and the basic functions of the image forming apparatus, the feature of allocating the resources of the copier to execute some function is performed; see paragraphs [0017]-[0024])**.

Re claim 26: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the method according to claim 24, wherein said detecting includes detecting the presence of connection of the additionally attachable expansion unit by determining if any unit is connected to the expansion unit connecting device **(i.e. a connection detecting means is used to detect whether the copy machine is connected to an external device. Determining if an external device is connected to a connecting means performs the detection of the presence of the connection. This performs the feature of detecting the presence of the external device additionally attached to the copier; see figs. 1 and 4; paragraphs [0017]-[0024])**.

Re claim 27: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the method according to claim 24, wherein the detecting includes detecting the presence of the connection of the additionally attachable expansion unit by determining that the additionally attachable expansion unit is connected when the operation unit is not connected to the operation unit connecting

device **(i.e. in one of the problems to be solved, in order to raise the basic functionality of the copy machine, the copy machine either has an LCD connected to the machine itself, or the expansion device control over the operation unit that can control the copy machine. The copy machine can have an external device connected and can recognize this connection through the connection means when the operating unit is not detected to be connected to control the CPU in the main body since the operating part control path switching part does not function in the scenario involving the external apparatus. With the master operating part control IC operating as an operation unit and the operating part not being connected to the CPU of the main body because of the operating part control path switching part not functioning to have the master operating part control the copier, the feature of the operating unit not connected to the operation unit connecting device is performed. This performs the feature of having an external device connected with an operation unit itself and a regular operation unit alone not being connected to the CPU of the copier to control the device; see paragraphs [0013]-[0024])**, and

by determining that the additionally attached expansion unit is not connected when the operation unit is connected to the operation unit connecting device **(i.e. in the system, when the external device is not connected to the main body of the machine through UARTs, the operation part control path switching part is functioning and detects the master side operating part control IC (105) connected to the CPU of the main body through the switching part. With this connection, the**

external device is not connected since the master side operating part control IC is not connected at the same time to the CPU of the main body as the external device because conflicts in the software may occur, which is the reason for the improvement over the conventional system; see paragraphs [0013]-[0022]).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 3, 5, 7, 16, 18 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi '194 in view of Kajita '972 (JP Pub No 2001217972).

Re claim 3: The teachings of Kobayashi "194 are disclosed above.

Kobayashi '194 discloses the image forming apparatus according to claim 1, further comprising:

an extension unit detecting device configured to detect a presence of connection of the additionally attachable expansion unit **(i.e. a connection detecting means is used to detect whether the copy machine is connected to an external device. This performs the feature of detecting the presence of the external device additionally attached to the copier; see figs. 1 and 4; paragraphs [0017]-[0024])**.

However, Kobayashi '194 fails to teach a power saving mode setting device configured to set a power saving mode to the image forming apparatus, wherein said

power saving mode setting device is configured to determine sections of the image forming apparatus to operate under the power saving mode in accordance with the detection result of the extension unit detecting device.

However, this is well known in the art as evidenced by Kajita '972. Kajita '972 discloses a power saving mode setting device configured to set a power saving mode to the image forming apparatus **(i.e. in the system, the image forming apparatus has an electric power supply that is configured to only supply energy to certain parts of the apparatus, such as the processor that controls the functions of the equipment in the image forming apparatus. When the apparatus is in standby mode, or the first standby condition, the apparatus uses a smaller power consumption than when operating in a normal mode; see paragraphs 0008]-[0041])**,

wherein said power saving mode setting device is configured to determine sections of the image forming apparatus to operate under the power saving mode in accordance with the detection result of the extension unit detecting device **(i.e. when an extension device is detected in the system, a different power-saving mode is setup. When different extension devices are connected, different parts of the apparatus are operated in the method where useless power consumption is prevented. When a certain extension device is detected, that equipment is initialized, but if no extension device is detected, the copy machine is continued in sleep mode to conserve energy; see paragraphs [0043]-[0053])**.

Therefore, in view of Kajita '972, it would have been obvious to one of ordinary

skill at the time the invention was made to have a power saving mode setting device configured to set a power saving mode to the image forming apparatus, wherein said power saving mode setting device is configured to determine sections of the image forming apparatus to operate under the power saving mode in accordance with the detection result of the extension unit detecting device in order to determine if an apparatus stays in a sleep or power conserving mode, based on the detection result of external factors (as stated in Kajita '972 paragraph [0053]).

Re claim 5: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the image forming apparatus according to claim 3, wherein said extension unit detecting device is configured to detect the presence of connection of the additionally attachable expansion unit by determining if any unit is connected to the expansion unit connecting device **(i.e. a connection detecting means is used to detect whether the copy machine is connected to an external device. Determining if an external device is connected to a connecting means performs the detection of the presence of the connection. This performs the feature of detecting the presence of the external device additionally attached to the copier; see figs. 1 and 4; paragraphs [0017]-[0024])**.

Re claim 7: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the image forming apparatus according to claim 3, wherein said extension unit detecting device is configured to detect the presence of the

connection of the additionally attachable expansion unit by determining that the additionally attachable expansion unit is connected when the operation unit is not connected to the operation unit connecting device **(i.e. in one of the problems to be solved, in order to raise the basic functionality of the copy machine, the copy machine either has an LCD connected to the machine itself, or the expansion device control over the operation unit that can control the copy machine. The copy machine can have an external device connected and can recognize this connection through the connection means when the operating unit is not detected to be connected to control the CPU in the main body since the operating part control path switching part does not function in the scenario involving the external apparatus. With the master operating part control IC operating as an operation unit and the operating part not being connected to the CPU of the main body because of the operating part control path switching part not functioning to have the master operating part control the copier, the feature of the operating unit not connected to the operation unit connecting device is performed. This performs the feature of having an external device connected with an operation unit itself and a regular operation unit alone not being connected to the CPU of the copier to control the device; see paragraphs [0013]-[0024])**, and

by determining that the additionally attachable expansion unit is not connected when the operation unit is connected to the operation unit connecting device **(i.e. in the system, when the external device is not connected to the main body of the machine through UARTs, the operation part control path switching part is**

functioning and detects the master side operating part control IC (105) connected to the CPU of the main body through the switching part. With this connection, the external device is not connected since the master side operating part control IC is not connected at the same time to the CPU of the main body as the external device because conflicts in the software may occur, which is the reason for the improvement over the conventional system; see paragraphs [0013]-[0022]).

Re claim 16: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the image forming system according to claim 11, wherein said expansion control device is configured to control the additionally attachable expansion unit **(i.e. the control unit on the external device, considered as the expansion device, is used to control the external device's operations. The control unit control is passed to the control unit of the external device when connected; see paragraphs [009]-[0024])**.

However, Kobayashi '194 fails to teach only when power is to be supplied to the expansion unit connecting device.

However, this is well known in the art as evidenced by Kajita '972. Kajita '972 discloses only when power is to be supplied to the expansion unit connecting device **(i.e. in Kajita '972, the expansion unit is supplied power when it is being operated and is not in standby mode. When the expansion unit is not in operation the standby condition in relation to the image forming apparatus is continued until the connection to the apparatus is detected; see paragraphs [0001]-[0019])**.

Therefore, in view of Kajita '972, it would have been obvious to one of ordinary skill at the time the invention was made to expansion control device controls the additionally attached expansion unit only when power is to be supplied to the expansion unit connecting device in order to offer a power supply setup when adding an extension unit (as stated in Kajita '972 paragraph [0008]).

Re claim 18: The teachings of Kobayashi '194 are disclosed above.

However, Kobayashi '194 fails to teach the method according to claim 17, further comprising: setting a power saving mode to the image forming apparatus, wherein the setting step including determining sections of the image forming apparatus to operate under the power saving mode in accordance the detection result.

However, this is well known in the art as evidenced by Kajita '972. Kajita '972 discloses setting a power saving mode to the image forming apparatus **(i.e. in the system, the image forming apparatus has an electric power supply that is configured to only supply energy to certain parts of the apparatus, such as the processor that controls the functions of the equipment in the image forming apparatus. When the apparatus is in standby mode, or the first standby condition, the apparatus uses a smaller power consumption than when operating in a normal mode; see paragraphs 0008]-[0041])**,

wherein the setting step including determining sections of the image forming apparatus to operate under the power saving mode in accordance the detection result **(i.e. when an extension device is detected in the system, a different power-saving**

mode is setup. When different extension devices are connected, different parts of the apparatus are operated in the method where useless power consumption is prevented. When a certain extension device is detected, that equipment is initialized, but if no extension device is detected, the copy machine is continued in sleep mode to conserve energy; see paragraphs [0043]-[0053]).

Therefore, in view of Kajita '972, it would have been obvious to one of ordinary skill at the time the invention was made to have the method step of setting a power saving mode to the image forming apparatus, wherein the setting step including determining sections of the image forming apparatus to operate under the power saving mode in accordance the detection result in order to determine if an apparatus stays in a sleep or power conserving mode, based on the detection result of external factors (as stated in Kajita '972 paragraph [0053]).

Re claim 25: The teachings of Kobayashi '194 are disclosed above.

However, Kobayashi '194 fails to teach the computer program product according to claim 24, further comprising: setting a power saving mode to the image forming apparatus, wherein the setting includes determining sections of the image forming apparatus to operate under the power saving mode in accordance the detection result.

However, this is well known in the art as evidenced by Kajita '972. Kajita '972 discloses setting a power saving mode to the image forming apparatus **(i.e. in the system, the image forming apparatus has an electric power supply that is configured to only supply energy to certain parts of the apparatus, such as the**

processor that controls the functions of the equipment in the image forming apparatus. When the apparatus is in standby mode, or the first standby condition, the apparatus uses a smaller power consumption than when operating in a normal mode; see paragraphs 0008]-[0041]),

wherein setting includes determining sections of the image forming apparatus to operate under the power saving mode in accordance with the detection result of the extension unit detecting device **(i.e. when an extension device is detected in the system, a different power-saving mode is setup. When different extension devices are connected, different parts of the apparatus are operated in the method where useless power consumption is prevented. When a certain extension device is detected, that equipment is initialized, but if no extension device is detected, the copy machine is continued in sleep mode to conserve energy; see paragraphs [0043]-[0053])**.

Therefore, in view of Kajita '972, it would have been obvious to one of ordinary skill at the time the invention was made to have setting a power saving mode to the image forming apparatus, wherein the setting includes determining sections of the image forming apparatus to operate under the power saving mode in accordance with the detection result of the extension unit detecting device in order to determine if an apparatus stays in a sleep or power conserving mode, based on the detection result of external factors (as stated in Kajita '972 paragraph [0053]).

10. Claims 9, 22 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi '194 in view of Yamakawa '595 (US Pat No 5892595).

Re claim 9: The teachings of Kobayashi '194 are disclosed above.
The image forming apparatus according to claim 1, wherein the image reading device includes a contact image sensor **(i.e. in Kobayashi '194, a scanning unit is used to scan a document. It is conventional for a scanner to use an image sensor to scan a document to develop an image from the scanned document. Although Kobayashi '194 does not specifically disclose having a contact image sensor, the feature of having an image sensor to scan a document is performed by Kobayashi "194; see paragraphs [0005]-[0024])**.

However, Kobayashi '194 fails to teach said image forming apparatus includes a color identification data adding device configured to add color identification data to image data read by the contact image sensor, said color identification data indicating a location and color component.

However, this is well known in the art as evidenced by Yamakawa '595. Yamakawa '595 discloses said image forming apparatus includes a color identification data adding device configured to add color identification data to image data read by the contact image sensor **(i.e. when image data is read by the sensors used in Yamakawa '595, color component values of each picture element of the image data is added to the output of the data. This is performed in the conventional R, G and B scanning system; see col. 1, lines 21-49), said color identification data**

indicating a location and a color component (i.e. when the scanning of the pixels are being performed, the positions of the color component values of each picture element is output by the image sensors to the image processing system. This performs the feature of having a location and a color component of image data; see col. 1, lines 21-49).

Therefore, in view of Yamakawa '595, it would have been obvious to one of ordinary skill at the time the invention was made to have the image forming apparatus includes a color identification data adding device configured to add color identification data to image data read by the contact image sensor, said color identification data indicating a location and a color component in order to read image data of an original and output color component values related to the positions of the pixels (as stated in Yamakawa '595 col. 1, lines 21-49).

Re claim 22: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the method according to claim 17, further comprising:

reading the image data by the image reading device including a contact image sensor **(i.e. in Kobayashi '194, a scanning unit is used to scan a document. It is conventional for a scanner to use an image sensor to scan a document to develop an image from the scanned document. Although Kobayashi '194 does not specifically disclose having a contact image sensor, the feature of having an image sensor to scan a document is performed by Kobayashi "194; see paragraphs [0005]-[0024])**.

However, Kobayashi '194 fails to teach adding color identification data to image data read by the contact image sensor, said color identification data indicating a location and color component.

However, this is well known in the art as evidenced by Yamakawa '595. Yamakawa '595 discloses adding color identification data to image data read by the contact image sensor **(i.e. when image data is read by the sensors used in Yamakawa '595, color component values of each picture element of the image data is added to the output of the data. This is performed in the conventional R, G and B scanning system; see col. 1, lines 21-49)**, said color identification data indicating a location and color component **(i.e. when the scanning of the pixels are being performed, the positions of the color component values of each picture element is output by the image sensors to the image processing system. This performs the feature of having a location and a color component of image data; see col. 1, lines 21-49)**.

Therefore, in view of Yamakawa '595, it would have been obvious to one of ordinary skill at the time the invention was made to have adding color identification data to image data read by the contact image sensor, said color identification data indicating a location and color component in order to read image data of an original and output color component values related to the positions of the pixels (as stated in Yamakawa '595 col. 1, lines 21-49).

Re claim 29: The teachings of Kobayashi '194 are disclosed above.

Kobayashi '194 discloses method according to claim 24, further comprising:

reading the image, by the image reading device including a contact image sensor **(i.e. in Kobayashi '194, a scanning unit is used to scan a document. It is conventional for a scanner to use an image sensor to scan a document to develop an image from the scanned document. Although Kobayashi '194 does not specifically disclose having a contact image sensor, the feature of having an image sensor to scan a document is performed by Kobayashi "194; see paragraphs [0005]-[0024])**.

However, Kobayashi '194 fails to teach adding color identification data to image data read by the contact image sensor, said color identification data indicating a location and color component.

However, this is well known in the art as evidenced by Yamakawa '595. Yamakawa '595 discloses adding color identification data to image data read by the contact image sensor **(i.e. when image data is read by the sensors used in Yamakawa '595, color component values of each picture element of the image data is added to the output of the data. This is performed in the conventional R, G and B scanning system; see col. 1, lines 21-49)**, said color identification data indicating a location and a color component **(i.e. when the scanning of the pixels are being performed, the positions of the color component values of each picture element is output by the image sensors to the image processing system. This performs the feature of having a location and a color component of image data; see col. 1, lines 21-49)**.

Therefore, in view of Yamakawa '595, it would have been obvious to one of ordinary skill at the time the invention was made to have the image forming apparatus includes a fifth computer code configured to add color identification data to image data read by the contact image sensor, said color identification data indicating a location and color component in order to read image data of an original and output color component values related to the positions of the pixels (as stated in Yamakawa '595 col. 1, lines 21-49).

11. Claims 8, 15, 21, 28 and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi '194, as applied to claims 1, 11, 17 and 24 above, and further in view of Namizuka '643 (US Pub No 2002/0036643).

Re claim 8: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the image forming apparatus according to claim 1, wherein the expansion unit connecting device includes a data transferring device configured to communicate image data and control commands with the additionally attached expansion unit **(i.e. UARTs used in Kobayashi '194, are used to communicate image data and control commands to and from the external devices connected to the copy machine. The UARTs can be considered to be the data transferring devices; see figs. 1,3-5; paragraphs [0001]-[0008] and [0017]-[0024])**.

However, Kobayashi '194 fails to teach a bus selecting device configured to select a data transfer destination in accordance with a type of the data received by the

data transferring device.

However, this is well known in the art as evidenced by Namizuka '643. Namizuka '643 discloses a bus selecting device configured to select a data transfer destination in accordance with whether the image data of the control commands are received by the data transferring device **(i.e. the CDIC (4) used in the system performs the feature of selecting a bus (parallel or serial) in order to transfer information to a certain destination on that selected bus. For example, when the image data needs to be additionally processed, the image data along with the image processing commands are sent to the CDIC (4) and this information is sent to the mechanism in the image forming apparatus that performs the image processing. When the image data needs to be faxed, the image data is sent to the FCU (11) by selecting the parallel bus and continuing to forward the image data to the FCU for facsimile processing; see paragraphs [0067]-[0075])**.

Therefore, in view of Namizuka '643, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of a bus selecting device configured to select a data transfer destination in accordance with a type of the data received by the data transferring device in order to have the CDIC and multiple buses used to communicate information of the system controller and process controller (as stated in Namizuka '643 see paragraphs [0069] and [0075]).

Re claim 15: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the image forming system according to claim 11, wherein said

additionally attached expansion unit includes a first image memory configured to store image data **(i.e. in the system of Kobayashi '194, image data is exchanged between both the external device and the image forming apparatus. With the exchange of this information, this information has to be stored at some location temporarily before it is sent over to the image forming apparatus. If a scanner is used, the image is conventionally stored on the ROM and then transmitted to the apparatus; see paragraphs [0001]-[0008])**.

However, Kobayashi '194 fails to teach said image forming apparatus includes an image memory connecting device configured to connect a second image memory configured to store image data, and said additionally attached expansion unit includes a storage control device configured to recognize and store image data having a same format as that to be stored in the second image memory.

However, this is well known in the art as evidenced by Namizuka '643. Namizuka '643 discloses said image forming apparatus includes an image memory connecting device configured to connect a second image memory configured to store image data **(i.e. in the conventional system, the printer and fax control units have their own respective CPUs and memory. Also, in the image forming apparatus, the video control unit, considered as the memory connecting device, is connected to the memory control unit (108) which is configured to store image data; see figs. 1 and 2; paragraphs [0004]-[0013])**, and said additionally attached expansion unit includes a storage control device configured to recognize and store image data having a same format as that to be stored in the second image memory **(i.e.**

in an embodiment of Namizuka '643, an IMAC (12) is connected to an externally connected computer used to process the information that comes from the computer. Just like the conventional, the IMAC can be used with the FCU, the computer or the printer. The IMAC is used to manage memory access and other functions. When the memory control part within the IMAC is used to temporarily store information before the memory control part transmits the same information temporarily stored in the memory control part to the memory (13) in the image forming apparatus. Since the image data does not change with any processing before being transmitted to the memory (13), the data transmitted to the memory (13) is the same as the data temporarily stored in the memory control part; see figs. 3-5; paragraphs [0070]-[0092]).

Therefore, in view of Namizuka '643, it would have been obvious to one of ordinary skill at the time the invention was made to have an image forming apparatus include an image memory connecting device configured to connect a second image memory configured to store image data, and said additionally attached expansion unit includes a storage control device configured to recognize and store image data having a same format as that to be stored in the second image memory in order to have a memory control part transmit data and store data in another memory device (as stated in Namizuka '643 paragraph [0092]).

Re claim 21: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the method according to claim 17, communicating, by the

expansion unit connecting device including a data transferring device, image data and control commands with the additionally attachable expansion unit **(i.e. UARTs used in Kobayashi '194, are used to communicate image data and control commands to and from the external devices connected to the copy machine. The UARTs can be considered to be the data transferring devices; see figs. 1,3-5; paragraphs [0001]-[0008] and [0017]-[0024])**; and

However, Kobayashi '194 fails to teach selecting, by a bus selecting device, a data transfer destination in accordance with a type of the data received by the data transferring device.

However, Namizuka '643 fails to teach selecting, by a bus selecting device, a data transfer destination in accordance with a type of the data received by the data transferring device **(i.e. the CDIC (4) used in the system performs the feature of selecting a bus (parallel or serial) in order to transfer information to a certain destination on that selected bus. For example, when the image data needs to be additionally processed, the image data along with the image processing commands are sent to the CDIC (4) and this information is sent to the mechanism in the image forming apparatus that performs the image processing. When the image data needs to be faxed, the image data is sent to the FCU (11) by selecting the parallel bus and continuing to forward the image data to the FCU for facsimile processing; see paragraphs [0067]-[0075])**.

Therefore, in view of Namizuka '643, it would have been obvious to one of ordinary skill at the time the invention was made to have the method step of selecting,

by a bus selecting device, a data transfer destination in accordance with a type of the data received by the data transferring device in order to have the CDIC and multiple buses used to communicate information of the system controller and process controller (as stated in Namizuka '643 see paragraphs [0069] and [0075]).

Re claim 28: The teachings of Kobayashi '194 are disclosed above.

Kobayashi '194 discloses the method according to claim 24, further comprising:

communicating, by the expansion unit connecting device including a data transfer device, image data and control commands with the additionally attached expansion unit **(i.e. UARTs used in Kobayashi '194, are used to communicate image data and control commands to and from the external devices connected to the copy machine. The UARTs can be considered to be the data transferring devices; see figs. 1,3-5; paragraphs [0001]-[0008] and [0017]-[0024])**.

However, Kobayashi '194 fails to teach selecting a data transfer destination in accordance with whether the image data or the control commands are received by the data transferring device.

However, this is well known in the art as evidenced by Namizuka '643.

Namizuka '643 discloses selecting a data transfer destination in accordance with whether the image data or the control commands are received by the data transferring device **(i.e. the CDIC (4) used in the system performs the feature of selecting a bus (parallel or serial) in order to transfer information to a certain destination on that selected bus. For example, when the image data needs to be additionally**

processed, the image data along with the image processing commands are sent to the CDIC (4) and this information is sent to the mechanism in the image forming apparatus that performs the image processing. When the image data needs to be faxed, the image data is sent to the FCU (11) by selecting the parallel bus and continuing to forward the image data to the FCU for facsimile processing; see paragraphs [0067]-[0075]).

Therefore, in view of Namizuka '643, it would have been obvious to one of ordinary skill at the time the invention was made to have the method step of selecting a data transfer destination in accordance with whether the image data or the control commands are received by the data transferring device in order to have the CDIC and multiple buses used to communicate information of the system controller and process controller (as stated in Namizuka '643 see paragraphs [0069] and [0075]).

Re claim 30: The teachings of Kobayashi '194 are disclosed above.

Kobayashi '194 discloses the image forming apparatus according to claim 1, wherein the additionally attachable expansion unit is configured to further connect to at least one function adding unit **(i.e. in the system, the UART, considered as the additionally attachable expansion unit, is used to connect an external device that introduces a function to the overall copier in the system; see paragraphs [0013]-[0024]),** which adds at least one function to the image forming system under control of the expansion control device **(i.e. the external device is added to the overall copier system, which is controlled by the CPU on the main board, considered as the expansion control**

device; see paragraphs [0013]-[0022]), and to allocate the resources, including the image reading device or the image forming device **(i.e. in the system, with the use of the external device to control the overall copier, the external device can control the function that the device introduces to the system and the basic copier functions of the copier device; see paragraphs [0013]-[0024])**.

However, Kobayashi '194 fails to specifically teach between the process controller and the at least one function adding unit.

However, this is well known in the art as evidenced by Namizuka '643. Namizuka '643 discloses between the process controller and the at least one function adding unit **(i.e. shown in the conventional device in paragraph [0007] is an expansion unit (i.e. the motherboard) that allows for an additional function to be added to the MFP. The PCU (102) has a system controller, considered as the process controller, which is used to receive instruction from the system controller (109) to use the PCU through instructions given to the PCU's controller. Also, in the overall invention, the system controller (14) controls the entire MFT and gives instructions to other controllers in the system, such as the process controller to perform other functions, such as facsimile communication; see paragraphs [0007]-[0012] and [0072]-[0075])**.

Therefore, in view of Namizuka '643, it would have been obvious to one of ordinary skill at the time the invention was made to have the function of between the process controller and the at least one function adding unit in order to have MFP

assignments controlled by the system controller and process controller (as stated in Namizuka '643 paragraph [0073]).

Re claim 31: The teachings of Kobayashi '194 are disclosed above.

Kobayashi '194 discloses the image forming apparatus according to claim 11, wherein the additionally attachable expansion unit is configured to further connect to at least one function adding unit **(i.e. in the system, the UART, considered as the additionally attachable expansion unit, is used to connect an external device that introduces a function to the overall copier in the system; see paragraphs [0013]-[0024])**, which adds at least one function to the image forming system under control of the expansion control device **(i.e. the external device is added to the overall copier system, which is controlled by the CPU on the main board, considered as the expansion control device; see paragraphs [0013]-[0022])**, and to allocate the resources, including the image reading device or the image forming device **(i.e. in the system, with the use of the external device to control the overall copier, the external device can control the function that the device introduces to the system and the basic copier functions of the copier device; see paragraphs [0013]-[0024])**.

However, Kobayashi '194 fails to specifically teach between the process controller and the at least one function adding unit.

However, this is well known in the art as evidenced by Namizuka '643. Namizuka '643 discloses between the process controller and the at least one function

adding unit **(i.e. shown in the conventional device in paragraph [0007] is an expansion unit (i.e. the motherboard) that allows for an additional function to be added to the MFP. The PCU (102) has a system controller, considered as the process controller, which is used to receive instruction from the system controller (109) to use the PCU through instructions given to the PCU's controller. Also, in the overall invention, the system controller (14) controls the entire MFT and gives instructions to other controllers in the system, such as the process controller to perform other functions, such as facsimile communication; see paragraphs [0007]-[0012] and [0072]-[0075])**.

Therefore, in view of Namizuka '643, it would have been obvious to one of ordinary skill at the time the invention was made to have the function of between the process controller and the at least one function adding unit in order to have MFP assignments controlled by the system controller and process controller (as stated in Namizuka '643 paragraph [0073]).

Re claim 32: The teachings of Kobayashi '194 are disclosed above.

The method according to claim 17, wherein the allocating includes allocating the resources, including the image reading device and the image forming device **(i.e. in the system, with the use of the external device to control the overall copier, the external device can control the function that the device introduces to the system**

and the basic copier functions of the copier device; see paragraphs [0013]-[0024]), and

the at least one function adding unit is configured to connect to the additionally attachable expansion unit **(i.e. in the system, the UART, considered as the additionally attachable expansion unit, is used to connect an external device that introduces a function to the overall copier in the system; see paragraphs [0013]-[0024])**, which adds at least one function to the image forming system under control of the expansion control device **(i.e. the external device is added to the overall copier system, which is controlled by the CPU on the main board, considered as the expansion control device; see paragraphs [0013]-[0022])**.

However, Kobayashi '194 fails to teach between the process controller and at least one function adding unit.

However, this is well known in the art as evidenced by Namizuka '643. Namizuka '643 discloses between the process controller and at least one function adding unit **(i.e. shown in the conventional device in paragraph [0007] is an expansion unit (i.e. the motherboard) that allows for an additional function to be added to the MFP. The PCU (102) has a system controller, considered as the process controller, which is used to receive instruction from the system controller (109) to use the PCU through instructions given to the PCU's controller. Also, in the overall invention, the system controller (14) controls the entire MFT and gives instructions to other controllers in the system, such as the process**

controller to perform other functions, such as facsimile communication; see paragraphs [0007]-[0012] and [0072]-[0075]).

Therefore, in view of Namizuka '643, it would have been obvious to one of ordinary skill at the time the invention was made to have the function of between the process controller and the at least one function adding unit in order to have MFP assignments controlled by the system controller and process controller (as stated in Namizuka '643 paragraph [0073]).

Re claim 33: The teachings of Kobayashi '194 are disclosed above.

The method according to claim 24, wherein the allocating includes allocating the resources, including the image reading device and the image forming device **(i.e. in the system, with the use of the external device to control the overall copier, the external device can control the function that the device introduces to the system and the basic copier functions of the copier device; see paragraphs [0013]-[0024])**, and

the at least one function adding unit is configured to connect to the additionally attachable expansion unit **(i.e. in the system, the UART, considered as the additionally attachable expansion unit, is used to connect an external device that introduces a function to the overall copier in the system; see paragraphs [0013]-[0024])**, which adds at least one function to the image forming system under control of the expansion control device **(i.e. the external device is added to the overall copier**

system, which is controlled by the CPU on the main board, considered as the expansion control device; see paragraphs [0013]-[0022]).

However, Kobayashi '194 fails to teach between the process controller and at least one function adding unit.

However, this is well known in the art as evidenced by Namizuka '643. Namizuka '643 discloses between the process controller and at least one function adding unit **(i.e. shown in the conventional device in paragraph [0007] is an expansion unit (i.e. the motherboard) that allows for an additional function to be added to the MFP. The PCU (102) has a system controller, considered as the process controller, which is used to receive instruction from the system controller (109) to use the PCU through instructions given to the PCU's controller. Also, in the overall invention, the system controller (14) controls the entire MFT and gives instructions to other controllers in the system, such as the process controller to perform other functions, such as facsimile communication; see paragraphs [0007]-[0012] and [0072]-[0075])**.

Therefore, in view of Namizuka '643, it would have been obvious to one of ordinary skill at the time the invention was made to have the function of between the process controller and the at least one function adding unit in order to have MFP assignments controlled by the system controller and process controller (as stated in Namizuka '643 paragraph [0073]).

12. Claims 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi '194, as modified by Namizuka '643, as applied to claims 8 and 21 above, in further view of Oteki '429 (US Pub No 2001/0019429).

Re claim 10: The teachings of Kobayashi '194 in view of Namizuka '643 are disclosed above.

Kobayashi '194 discloses the image forming apparatus according to claim 8, further comprising:

a supervising device configured to supervise data input and output to and from the process controller **(i.e. the control change pass section (416) of Kobayashi '194 supervises the information that is input and output from the CPU in the image forming apparatus and the section decides whether to give control to the different external devices that are connected or to give control to the CPU. This performs the feature of supervising the inputs and outputs of the system since these inputs and outputs have to be managed in order to determine other processing in the system; see figs. 1 and 3; paragraphs [0009]-[0024])**,

wherein said expansion unit connecting device includes a bus configured to communicate data and a bus interface for the bus **(i.e. the UART, considered as the expansion unit connecting device is configured to communicate data to the bus (716) in the system. The bus (716) has a bus interface in order to be used to communicate information through the bus to other parts of the image forming apparatus; see figs. 1 and 3; paragraphs [0009]-[0024])**.

However, Kobayashi '194 fails to teach a read image data processing device configured to apply image processing to image data read by the image reading device; a write image data processing device configured to convert the image data into a signal driving the image forming apparatus and configured to apply image processing to the signal required along with the converting process; and at least the read image processing device, the write image processing device, the supervising device, the bus interface and the bus selecting device are arranged on a same chip.

However, this is well known in the art as evidenced by Oteki '429. Oteki '429 discloses

a read image data processing device configured to apply image processing to image data read by the image reading device **(i.e. Oteki '429 discloses a image data control unit (100) that applies processing to an image that has been read into the system by an image reading unit (101); see fig. 1; paragraphs [0052]-[0064])**;

a write image data processing device configured to convert the image data into a signal driving the image forming apparatus and configured to apply image processing to the signal required along with the converting process **(i.e. the image data control unit (100) also converts the data into serial or parallel data in order to be used by the image writing unit (104) to drive the output of the image writing unit. This unit interfaces with the image processing and reading units to apply the appropriate image compression/decompression, scaling and format conversion to the image data in order to make the data more suitable for the image writing unit for output processing; see fig. 1; paragraphs [0052]-[0102])**; and

at least the read image processing device, the write image processing device, the supervising device, the bus interface and the bus selecting device are arranged on a same chip **(i.e. the image data control unit can also perform the supervision of the data since it monitors the input and output of data into itself and the input and output of the data in the reading and writing units. The image data control unit performs processing to the image data read and converts the data in order to make the data appropriate for the image writing unit. Therefore, the image data control unit performs the feature of the read and write image processing device. With the image data controller (203) acting as the image data control unit, the controller (203) communicates with both a serial and parallel bus. At different times, information is received from each bus and there is a device that performs the feature of selecting which bus to accept information from and to transmit information through. This performs the bus interface and bus selecting device feature. With all of these features on the image data controller (203) then it is understood that since one component performs all these features, that one controller is one microprocessor which is comprised of one chip; see figs. 1,2 and 4; paragraphs [0052]-[0127])**.

Therefore, in view of Oteki '429, it would have been obvious to one of ordinary skill at the time the invention was made to have a read image data processing device configured to apply image processing to image data read by the image reading device, a write image data processing device configured to convert the image data into a signal driving the image forming apparatus and configured to apply image processing to the

signal required along with the converting process and at least the read image processing device, the write image processing device, the supervising device, the bus interface and the bus selecting device are arranged on a same chip incorporated in the combination of Kobayashi '194, as modified by the features of Namizuka '643, in order to have the size of a processing circuit be reduced in an image processing apparatus (as stated in Oteki '429 paragraph [0024]).

Re claim 23: The teachings of Kobayashi '194 in view of Namizuka '643 are disclosed above.

Kobayashi '194 discloses the method according to claim 21, further comprising:

supervising, by a supervising device, data input and output to and from the process controller **(i.e. the control change pass section (416) of Kobayashi '194 supervises the information that is input and output from the CPU in the image forming apparatus and the section decides whether to give control to the different external devices that are connected or to give control to the CPU. This performs the feature of supervising the inputs and outputs of the system since these inputs and outputs have to be managed in order to determine other processing in the system; see figs. 1 and 3; paragraphs [0009]-[0024])**,

wherein said expansion unit connecting device includes a bus configured to communicate data and a bus interface for the bus **(i.e. the UART, considered as the expansion unit connecting device is configured to communicate data to the bus (716) in the system. The bus (716) has a bus interface in order to be used to**

communicate information through the bus to other parts of the image forming apparatus; see figs. 1 and 3; paragraphs [0009]-[0024]).

However, Kobayashi '194 fails to teach applying, by a read image processing device, image processing to image data read by the image reading device; converting, by a write image processing device, the image data into a signal driving the image forming apparatus and applying image processing to the signal necessitated along with the converting process; and wherein at least the read image processing device, the write image processing device, the supervising device, the bus interface and the bus selecting device are arranged on a same chip.

However, this is well known in the art as evidenced by Oteki '429. Oteki '429 discloses applying image processing to image data read by the image reading device **(i.e. Oteki '429 discloses a image data control unit (100) that applies processing to an image that has been read into the system by an image reading unit (101); see fig. 1; paragraphs [0052]-[0064])**;

converting the image data into a signal driving the image forming apparatus and applying image processing to the signal necessitated along with the converting process **(i.e. the image data control unit (100) also converts the data into serial or parallel data in order to be used by the image writing unit (104) to drive the output of the image writing unit. This unit interfaces with the image processing and reading units to apply the appropriate image compression/decompression, scaling and format conversion to the image data in order to make the data more suitable for the image writing unit for output processing; see fig. 1; paragraphs [0052]-[0102])**;

and

wherein at least the read image processing device, the write image processing device, the supervising device, the bus interface and the bus selecting device are arranged on a same chip **(i.e. the image data control unit can also perform the supervision of the data since it monitors the input and output of data into itself and the input and output of the data in the reading and writing units. The image data control unit performs processing to the image data read and converts the data in order to make the data appropriate for the image writing unit. Therefore, the image data control unit performs the feature of the read and write image processing device. With the image data controller (203) acting as the image data control unit, the controller (203) communicates with both a serial and parallel bus. At different times, information is received from each bus and there is a device that performs the feature of selecting which bus to accept information from and to transmit information through. This performs the bus interface and bus selecting device feature. With all of these features on the image data controller (203) then it is understood that since one component performs all these features, that one controller is one microprocessor which is comprised of one chip; see figs. 1,2 and 4; paragraphs [0052]-[0127])**.

Therefore, in view of Oteki '429, it would have been obvious to one of ordinary skill at the time the invention was made to have the method steps of applying image processing to image data read by the image reading device, converting the image data into a signal driving the image forming apparatus and applying image processing to the

signal necessitated along with the converting process and wherein at least the read image processing device, the write image processing device, the supervising device, the bus interface and the bus selecting device are arranged on a same chip incorporated in the combination of Kobayashi '194, as modified by the features of Namizuka '643, in order to have the size of a processing circuit be reduced in an image processing apparatus (as stated in Oteki '429 paragraph [0024]).

13. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi '194, as applied to claim 12 above, and further in view of Namizuka '821 (IS Pub No 2001/0015821).

Re claim 13: The teachings of Kobayashi '194 are disclosed above.
Kobayashi '194 discloses the image forming system according to claim 12, wherein said operation selecting device is configured to select one of the first and second devices in accordance with the expansion control device **(i.e. the control is changed to the device which produces the least amount of ROM to run in the system. Since both operating units of the image forming device and an expansion device would cause a lot of ROM capacity to be wasted, the system chooses the expansion device if the function of the expansion device is desired. If the function of the expansion device is not desired, the control will be passed to the operation unit on the image forming device since, the expansion unit may not be connected at that time and is limited in what it controls; see paragraphs [0009]-[0024])**.

However, Kobayashi '194 fails to teach select one of the first and second devices in accordance with a processing load.

However, this is well known in the art as evidenced by Namizuka '821. Namizuka '821 discloses select one of the first and second devices in accordance with a processing load **(i.e. in image processing, a unit shares image data with another unit in order for the load on the previous unit to be reduced; see paragraphs [0024] and [0025]).**

Therefore, in view of Namizuka '821, it would have been obvious to one of ordinary skill at the time the invention was made to select one of the first and second devices in accordance with a processing load in order to reduce the load and the processing time can be reduced (as stated in Namizuka '821 paragraph [0024]).

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAD DICKERSON whose telephone number is (571)270-1351. The examiner can normally be reached on Mon. thru Thur. 9:00-6:30 Fri. 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Haskins can be reached on (571)-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. D./
/Chad Dickerson/
Examiner, Art Unit 2625

/Gabriel I Garcia/
Acting SPE of Art Unit 2625